

# Integrating Two Cloud Services with IBM WebSphere Cast Iron Live

## IBM Redbooks Solution Guide

As more organizations transition from traditional applications to cloud-based applications, the need for solutions that integrate these two applications is increasing. For example, a company needs to synchronize calendars between its customer relationship management (CRM) system and a customer's calendar application. This way, the calendar application users can see events that were created in the CRM on the web or on their mobile device. The challenge is to accomplish the integration without embarking on a lengthy, costly, and complex project cycle that requires specialized skill sets and multiple moving parts to install and maintain.



Figure 1. Calendars that need synchronizing

IBM® WebSphere® Cast Iron® provides a solution that meets the challenge of rapidly integrating cloud applications with on-premise systems, cloud applications-to-cloud applications, and on-premise to on-premise applications. The WebSphere Cast Iron environment focuses on the business requirements, the applications, and the business user requirements, while removing the daunting complexity of integration. This guide explores a calendar synchronization scenario to demonstrate how WebSphere Cast Iron and its included cloud-based service WebSphere Cast Iron Live provide this integration.

### Did you know?

Experts expect the global cloud-computing market to reach 241 billion US dollars in 2020 compared to 40.7 billion US dollars in 2010. For more information, see "Cloud Computing Market Will Top \$241 Billion in 2020" at:

<http://www.cloudtweaks.com/2011/04/cloud-computing-market-will-top-241-billion-in-2020>

## Business value

The value in integrating cloud-based calendars in general is in the time saved by eliminating the need to enter, manage, and access duplicate information between the various systems. Synchronized calendars offer the following advantages:

- Increase user productivity
- Accelerate business processes
- Manage schedules more efficiently
- Offer a simpler way to manage business events across applications and mobile devices

These advantages result in more easily organized and maintained events and meetings with current and prospective customers, with improved calendar integrity while ensuring that everyone is aligned.

## Solution overview

IBM WebSphere Cast Iron is an application programming interface (API) management platform that provides an approach to integrating applications but does not require programming knowledge. Business requirements determine whether to use the WebSphere Cast Iron cloud service (WebSphere Cast Iron Live) or an on-premise integration appliance for configuring the integration. This scenario uses the software as a service (SaaS) applications NetSuite and Google. Because both applications are in the cloud, we use WebSphere Cast Iron Live for an “all cloud” scenario, as shown in Figure 2.



Figure 2. WebSphere Cast Iron Live solution

WebSphere Cast Iron Live provides the same WebSphere Cast Iron Studio development environment and runtime functions as a physical or virtual integration appliance but through a cloud-based service. In WebSphere Cast Iron Live, you publish a project to an environment, such as a development, test, and production environment. The environment contains the functions of an on-premise integration appliance. Similar to WebSphere Cast Iron Studio, you can build integration flows in WebSphere Cast Iron Live. With WebSphere Cast Iron Live, you create an integration *project* that contains one or more *orchestrations*. Each orchestration is built with several *activities* that define the flow of data. You can define the details of an activity from the configuration panes within Live.

A project contains all of the assets that are required for the orchestrations to run, including any file schemas, Web Services Description Language (WSDL) files, and functions. The project also defines connectivity to the sources of data, which are the *endpoints*. WebSphere Cast Iron contains many built-in connectors to applications (for example SAP), databases, and web services that make connecting to these endpoints straightforward.

WebSphere Cast Iron also provides *Template Integration Projects (TIPs)* that encapsulate an integration use case between specific endpoints and that include preferred practices. You can download these TIPs from the WebSphere Cast Iron community and modify to fit your needs. If you do not have a WebSphere Cast Iron Live account, the scenario can be developed and verified in WebSphere Cast Iron Studio installed on your PC.

## Solution architecture

Figure 3 shows the overall architecture for the integration between Google Calendar and NetSuite. This architecture was configured by using WebSphere Cast Iron Live.

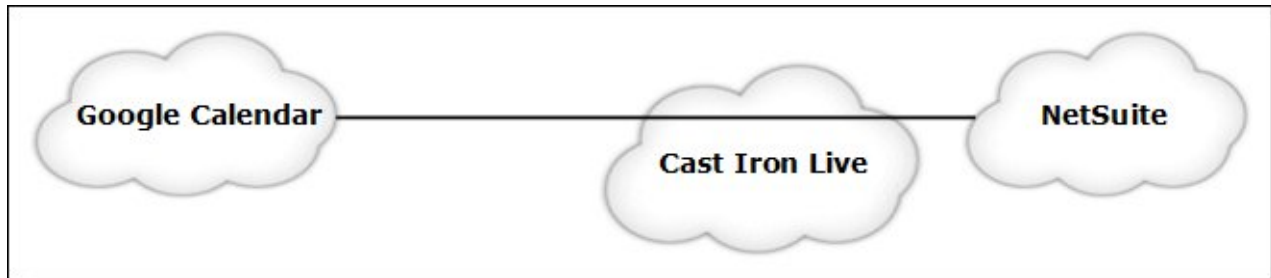


Figure 3. Architecture for NetSuite to Google Calendar integration

Figure 4 shows the architecture of WebSphere Cast Iron Live, which provides the configuration and deployment tools.

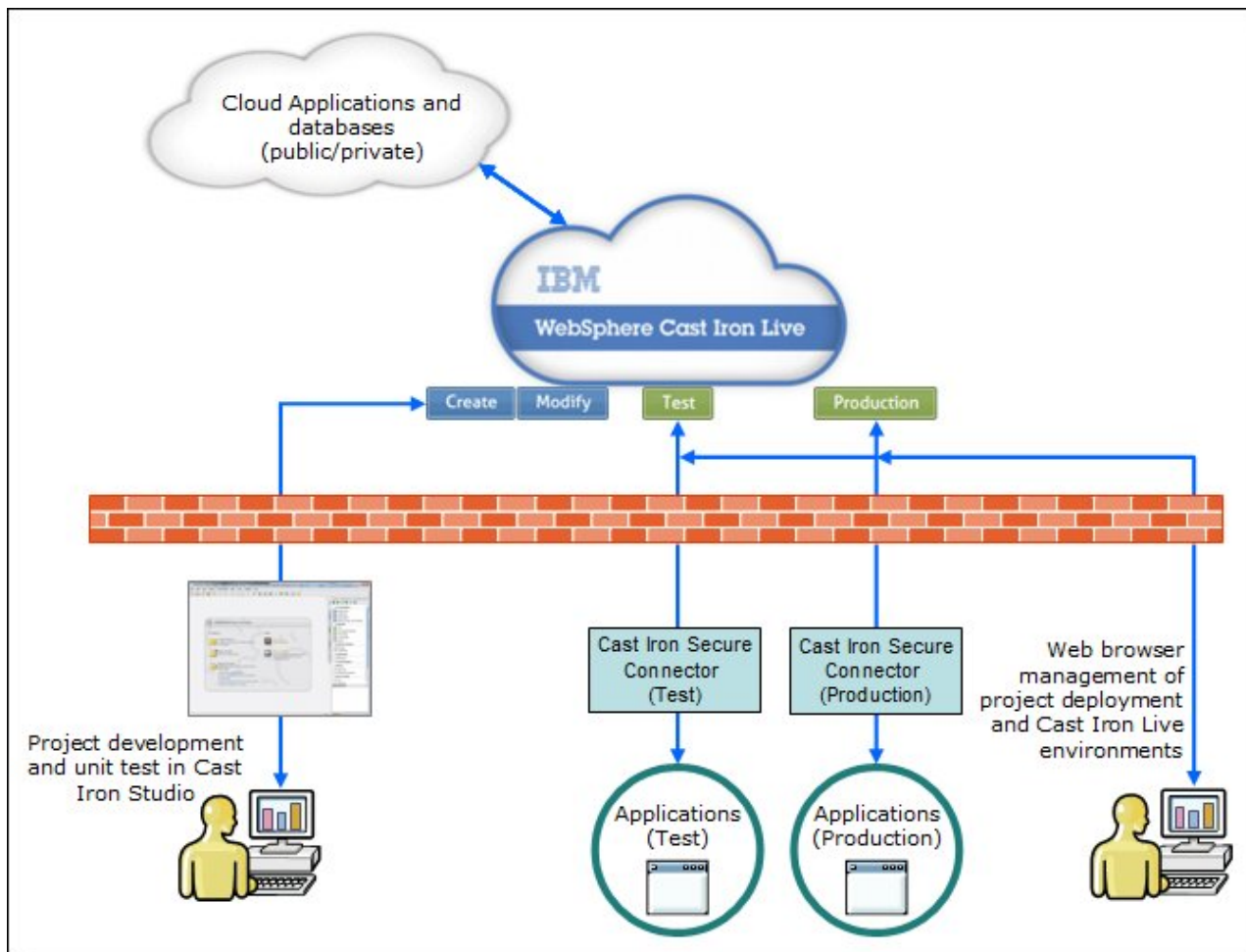


Figure 4. WebSphere Cast Iron Live architecture

## Usage scenario: NetSuite to Google Calendar synchronization

This scenario illustrates how to use a TIP that provides the required orchestrations for the example integration. The TIP in this scenario contains orchestrations to enable connectivity and updates, and to synchronize a NetSuite calendar, to the Google Calendar. This primary orchestration is extended to enable the update of Google Calendar from NetSuite and to show how synchronization of CRM-based data can occur.

The following steps outline the primary orchestration, as illustrated in Figure 5:

1. Start is initiated by a schedule activity.
2. Use a shared variable to record the last job date it ran.
3. Find the NetSuite events that were created or updated after this date.
4. Update the last job date variable with the date and time after finding the NetSuite events.
5. Log in to Google.
6. Loop through each NetSuite event. Then, update the existing Google event if it exists or create an event in Google.
7. Store the Google event ID in NetSuite.

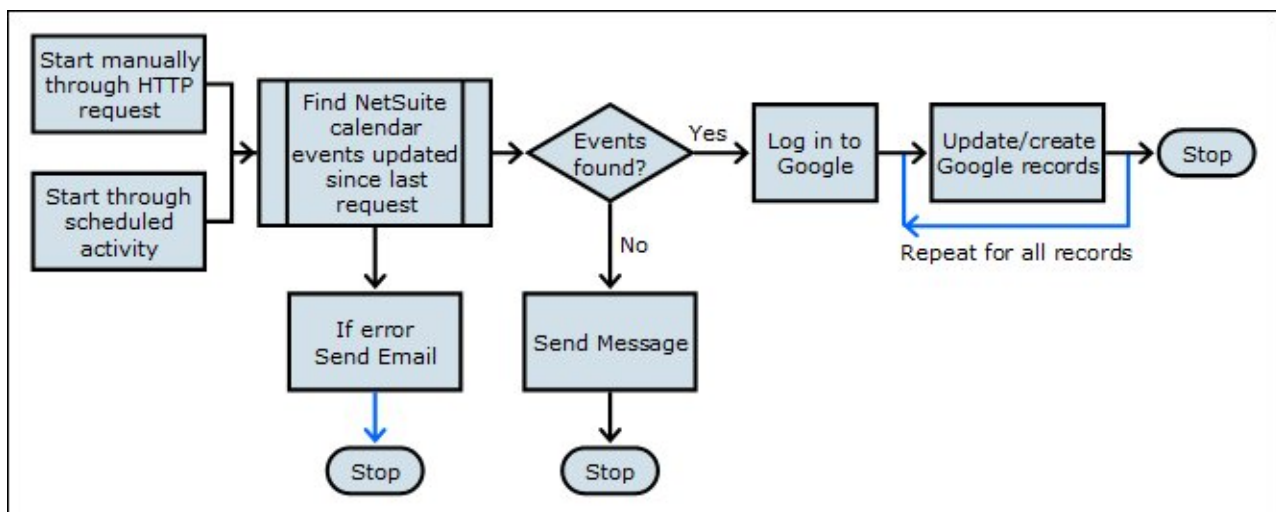


Figure 5. Orchestration workflow

To follow this scenario, you need the following accounts or logins:

- A NetSuite account
- A Google account
- A WebSphere Cast Iron Live login

### Logging in to WebSphere Cast Iron Live

In a web browser, go to the WebSphere Cast Iron Live website at:  
<https://cloud2.castiron.com/login>

### Creating a project using a TIP

Create a project. To search for TIPs, select **Google Calendar**, and then select **NetSuite \_Google\_syncCalendar\_CastIronLive**. Follow the wizard. Figure 6 shows the TIPs search results.

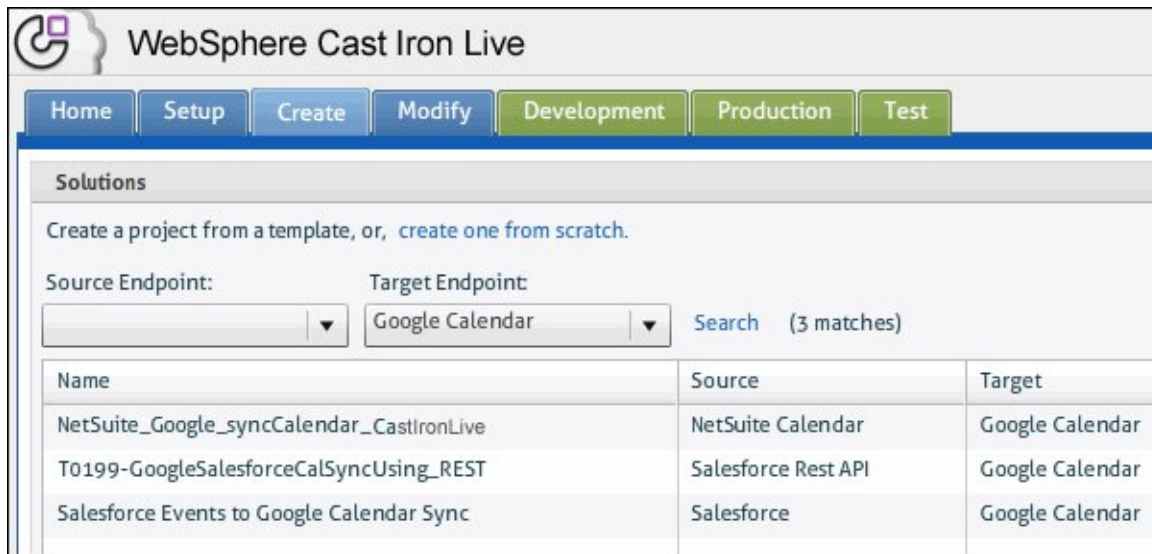


Figure 6. List of TIPs using Google Calendar as the target endpoint

Having completed the TIP configuration, you now have access to all orchestrations in WebSphere Cast Iron Studio and can develop them. In this scenario, you modify the primary orchestration.

### Modifying the orchestration

The TIP completed in the previous section provides most of the requirements of this scenario. In addition to starting the orchestration jobs on a schedule, this scenario adds an HTTP Receive Request activity so that the orchestration can be invoked manually. To modify the orchestration, you open it as shown in Figure 7 and then use the tools that are available in the workspace to rework the "Schedule Job" step (in this example) to accommodate an HTTP request.

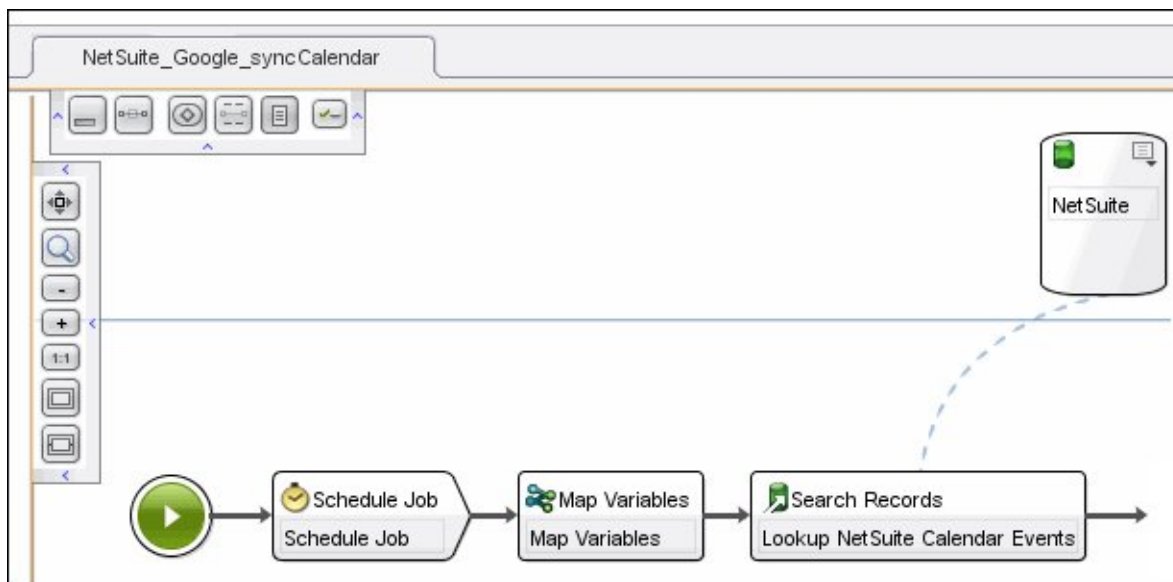


Figure 7. NetSuite\_Google\_syncCalendar orchestration open in the studio workspace

## Publishing and deploying the project to the development environment

You can now publish the project to the development environment. After you publish a project, you can configure the project, for example, with error logging levels, and then you can deploy the project. The project then waits for a starter activity to occur. This orchestration can be started with an HTTP request or through a schedule. Before the project is published to the development environment, the schedule is changed to every hour. Figure 8 shows the tabs for selecting the appropriate environment.

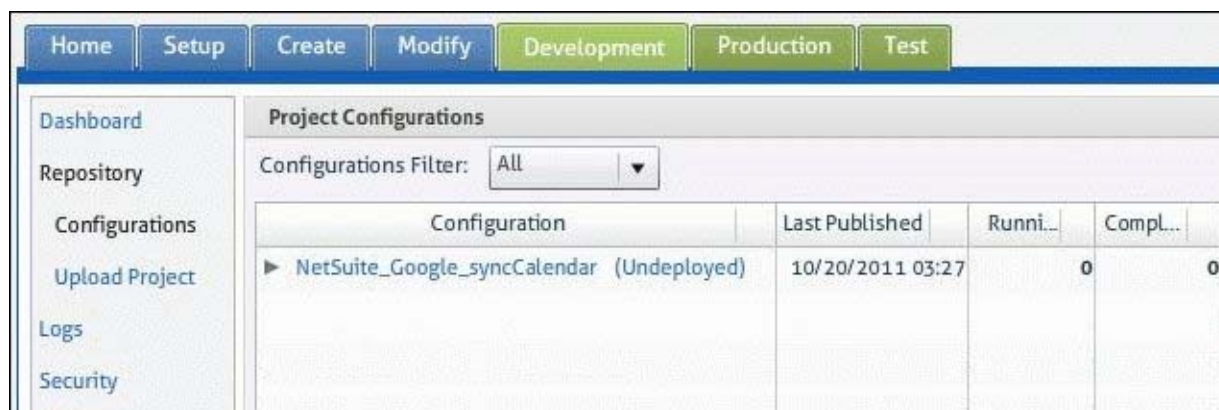


Figure 8. Project configurations in WebSphere Cast Iron Live

## Integration

Cloud integration solutions can be developed and deployed with the following form factors, each of which provides the same functions:

- WebSphere DataPower® Cast Iron Appliance XH40 is a self-contained physical appliance that provides everything needed to connect cloud and on-premise applications. Built on market-leading IBM technology, the appliance can be installed and managed within a local data center.
- WebSphere Cast Iron Hypervisor™ Edition is a virtual appliance that can be installed on your existing servers by using virtualization technology. It provides the same functions as the physical appliance.
- Cast Iron Cloud2 is a complete multitenant cloud to connect cloud and on-premise applications. By using Cast Iron Cloud2, you can design, run, and manage integrations in the cloud without any infrastructure footprint onsite.

## Supported platforms

Linux Fedora and various Microsoft Windows operating systems, in addition to x86-32 and x86-64 hardware, are supported to a varying degree by parts of the product. For more information, see WebSphere Cast Iron Cloud Integration at:

<http://www.ibm.com/software/integration/cast-iron-cloud-integration/reqs>



## Ordering information

This product is only available through IBM Passport Advantage®. Table 1 lists the components of IBM WebSphere Cast Iron.

Table 1. Ordering part numbers and feature codes

Program name	Product ID
IBM WebSphere Cast Iron Live Standard Edition	5725-C17
IBM WebSphere Cast Iron Live Enterprise Edition	5725-C16
IBM WebSphere Cast Iron Express	5725-E61
IBM WebSphere Cast Iron Hypervisor Standard Edition	5725-C11
IBM WebSphere Cast Iron Hypervisor Enterprise Edition	5725-C12
IBM WebSphere DataPower® Cast Iron Appliance XH40	Various machine type/models

For more information, see the IBM Offering Information page (to search on announcement letters, sales manuals, or both) at:

[http://www.ibm.com/common/ssi/index.wss?request\\_locale=en](http://www.ibm.com/common/ssi/index.wss?request_locale=en)

On this page, enter WebSphere Cast Iron Hypervisor, WebSphere Cast Iron Live and Express, or WebSphere DataPower Cast Iron Appliance XH40. Select the information type, and then click **Search**. On the next page, narrow your search results by geography and language.

## Related information

For more information, see the following documents:

- *Getting Started with IBM WebSphere Cast Iron Cloud Integration*, SG24-8004  
<http://www.redbooks.ibm.com/abstracts/sg248004.html?Open>
- *IBM WebSphere Cast Iron Introduction and Technical Overview*, REDP-4840  
<http://www.redbooks.ibm.com/abstracts/redp4840.html?Open>
- IBM Offering Information page (to search on announcement letters, sales manuals, or both)  
[http://www.ibm.com/common/ssi/index.wss?request\\_locale=en](http://www.ibm.com/common/ssi/index.wss?request_locale=en)
- IBM WebSphere Cast Iron Version 6.1 Information Center  
<http://publib.boulder.ibm.com/infocenter/wci/v6r1m0/index.jsp>
- WebSphere Cast Iron Cloud Integration  
<http://www.ibm.com/software/integration/cast-iron-cloud-integration>
- WebSphere Cast Iron Express  
<http://express.castiron.com/express>
- WebSphere Cast Iron Cloud Integration prerequisites  
<http://www.ibm.com/software/integration/cast-iron-cloud-integration/reqs>
- IBM Support Portal  
<http://www.ibm.com/support/entry/portal/Overview>
- IBM Fix Central  
<http://www.ibm.com/support/fixcentral>
- WebSphere Cast Iron Cloud integration Fixpacks  
<http://bit.ly/XBzmg4>
- WebSphere Cast Iron Cloud integration Community page  
<http://community.castiron.com>
- Salesforce Implementation Considerations  
[http://www.salesforce.com/us/developer/docs/api/Content/implementation\\_considerations.htm](http://www.salesforce.com/us/developer/docs/api/Content/implementation_considerations.htm)



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